

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave.St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.21**WELDING WITNESS REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WWR-000386**Date Inspected:** 06-Aug-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**Location:** Shanghai, China**Witness:** **Procedure Qualification Record**
Welding **NDT****Welder Qualification** **Fracture Critical**
Mechanical Testing, describe:**Index Lot #:** B72-052-07a**Witness Lot #:** B71-053-07**Bridge No:** 34-0006**Component:** Bid: 52,55 Tower & Girder**Welder:** Jiang Xia Hu**ID #:** N/A**Joint Description:** B-U2a

N/A

WPS ID #: PWPS-B-T-3221

N/A

Base Metal: A709-HPS485W

N/A

PQR ID #: HP2007153

N/A

Thickness: 90 millimeters

N/A

Process: SAW

N/A

Electrode Spec/Class: AWS A5.17/EM12K JW-3

N/A

Positions: Flat (1G)

N/A

Backing Material: A709M-HPS485W

N/A

CWI: Wei Huang/Xu Bing

N/A

Average Amps:

N/A

AWS Code: AWS D1.5 2002

N/A

Average Volts:

N/A

Applicable Sec: Paragraph 5.13

N/A

Travel Speed:

N/A

Heat Input:

N/A

Preheat:

N/A

Summary of Items Observed:

The Caltrans Quality Assurance (QA) Inspector was present as requested to witness the mechanical tests for Procedure Qualification record(PQR)test plate using submerged arc welding(SAW)with 4.8 mm diameter electrode, in the 1G(flat) position. The test was performed per the AWS D1.5, Section 5.20 requirements. The Charpy V notch test results obtained at the weld area (temperature -30 Celsius) were as follows: test specimen BBW7153-4, 9 Joules; BBW7153-5, 6 Joules; BBW7153-6, 7 joules; BBW7153-7, 10 Joules; BBW7153-8, 11 Joules. The minimum required CVN value is 34 Joules for A709 Grade 345 (undermatched) according to AWS D1.5 section 12 fracture critical members.

Summary of Conversations:

The QA inspector had a conversation with ZPMC Welding Engineer Huang Wei. Mr. Wei, relayed to the QA inspector that ZPMC rejected the PQR HP2007153 due to the weld metal failed to comply with the minimum CVN requirements for welding PQRs according to AWS D1.5 section 12 for fracture critical members.

Observed welding,testing or results:

WELDING WITNESS REPORT

(Continued Page 2 of 2)

is in general conformance with the contract requirements.
is not in conformance with the contract requirements.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Acuna,Alfredo	Quality Assurance Inspector
Reviewed By:	McClary,David	QA Reviewer
